

**IN THE CLAIMS:**

1. *(Currently Amended)* A semiconductor device having at least one semiconductor chip manufactured from a wafer, said semiconductor chip comprising said device and having a two-dimensional code pattern for information management provided directly on a surface of said at least one semiconductor chip with the pattern representing chip ID information, and said two-dimensional code pattern is comprised of a plurality of square blocks arranged in a matrix in a predetermined two-dimensional region.

2. *(Original)* A semiconductor device according to claim 1, wherein:  
said chip ID information includes chip information inherent to each chip.

3. *(Original)* A semiconductor device according to claim 1, wherein:  
said chip ID information is projected and exposed using a liquid crystal mask that is capable of changing a light transmitting pattern for each exposure.

4. *(Currently Amended)* A semiconductor device manufactured using a lead frame, with the lead frame having a two-dimensional code pattern for information management provided on said lead frame to which semiconductor ships/chips are bonded, with the pattern being directly applied to a peripheral surface of the lead frame and representing frame ID information, and said two-dimensional code pattern is comprised of a plurality of square blocks arranged in a grid in a predetermined two-dimensional region.

5. *(Original)* A semiconductor device according to claim 4, wherein:  
said frame ID information includes chip positional information corresponding to chips within said frame.

6. *(Previously Amended)* A semiconductor device according to claim 4, wherein:  
said frame ID information is made to correspond to chip ID information provided as a two-dimensional barcode pattern for information management for each chip.

7. *(Currently Amended)* A semiconductor device having at least one semiconductor chip sealed by resin, and having a two-dimensional code pattern for information management provided at directly on an outer surface of said resin and representing product ID information, and said two-dimensional code pattern is comprised of a plurality of square blocks arranged in a matrix in a predetermined two-dimensional region.

8. *(Original)* A semiconductor device according to claim 7, wherein:  
said product ID information includes additional information corresponding to individual chips that are resin-sealed.

9. *(Previously Amended)* A semiconductor device according to claim 7, wherein:  
said product ID information corresponds to chip ID information provided as a two-dimensional barcode pattern for information management for each chip.

10. *(Previously Amended)* A semiconductor device according to claim 7, wherein:  
said product ID information corresponds to frame ID information provided as a two-dimensional barcode pattern for information management on a lead frame to which semiconductor chips are bonded.

11. *(Currently Amended)* An information management system for semiconductor devices, having at least one semiconductor chip that implements management of information related to said semiconductor devices separately for individual semiconductor devices comprising:

a read device that reads chip ID information, said chip ID information is provided directly on a surface of said semiconductor chip as a two-dimensional barcode pattern for information management for each chip, said two-dimensional barcode pattern is comprised of a plurality of square blocks arranged in a matrix in a predetermined two-dimensional region; and

a management unit that registers said chip ID information thus read and manages individual semiconductor manufacturing processes based upon said chip ID information thus registered.

12. *(Previously Amended)* An information management system for semiconductor devices according to claim 11, wherein:

said chip ID information is made to correspond to mapping data obtained during a probing process.

13. (Original) An information management system for semiconductor devices according to claim 11, wherein:

said chip ID information is projected and exposed using a liquid crystal mask that is capable of changing a light transmitting pattern for each exposure.

14. (Currently Amended) An information management system for semiconductor device manufactured using a lead frame, which system implements management of information related to said semiconductor devices separately for individual semiconductor devices comprising:

a read device that reads frame ID information, said frame ID information is provided directly on a peripheral surface of said lead frame as a two-dimensional code pattern for information management, said two-dimensional code pattern is comprised of a plurality of square blocks arranged in a matrix in a predetermined two-dimensional region; and

a management unit that registers said frame ID information thus read and manages individual semiconductor manufacturing processes based upon said frame ID information thus registered.

15. (Previously Amended) An information management system for semiconductor devices according to claim 14, wherein:

said frame ID information corresponds to chip ID information provided as a two-dimensional barcode pattern for information management for each chip.

16. *(Currently Amended)* An information management system for semiconductor devices having semiconductor chips sealed by resin, which system implements management of information related to said semiconductor devices separately for individual semiconductor devices comprising:

a read device that reads product ID information, said product ID information is provided as a two-dimensional code pattern for information management at directly on an outer surface of said resin, said two-dimensional code pattern is comprised of a plurality of square blocks arranged in a matrix in a predetermined two-dimensional region; and

a management unit that registers said product ID information ~~thus read~~ and manages a product shipping process based upon said product ID information thus registered.

17. *(Previously Amended)* An information management system for semiconductor devices according to claim 16, wherein: said product ID information corresponds to chip ID information provided as a two-dimensional barcode pattern for information management for each chip.

18. *(Previously Amended)* A semiconductor device according to claim 16, wherein: said product ID information corresponds to frame ID information provided as a two-dimensional barcode pattern for information management on a lead frame to which semiconductor chips are bonded.

19. *(Previously Amended)* An information management system for semiconductor devices according to claim 16, wherein:

said product ID information that is registered corresponds to manufacturing process history information corresponding to each chip.

20. *(Previously Amended)* An information management system for semiconductor devices according to claim 16, wherein:

said product ID information that is registered corresponds to claim information regarding claims made in the field after product shipment.

21. *(Previously Amended)* A semiconductor device according to claim 1, wherein said two-dimensional code pattern is formed on said semiconductor chip by photolithography.

22. *(New)* A semiconductor device according to claim 7, wherein the blocks of two-dimensional code are formed by laser printing directly on the outer surface of the resin.